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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,826	02/01/2002	Daniel S. Pickard	IB-1581	9952

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LAWRENCE BERKELEY NATIONAL LABORATORY
ONE CYCLOTRON ROAD, MAIL STOP 90B
UNIVERSITY OF CALIFORNIA
BERKELEY, CA 94720

EXAMINER

LEE, WILSON

ART UNIT PAPER NUMBER

2163

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/060,826	Applicant(s) PICKARD ET AL.	
	Examiner Wilson Lee	Art Unit 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-11 and 14-24 is/are allowed.
- 6) ☒ Claim(s) 1,2,12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 12, 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 12, 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Goodman et al. (6,887,339).

Regarding Claim 1, Goodman discloses a matching network for coupling an RF power supply to an RF antenna in a plasma generator comprising:

- a resonantly tunable circuit formed of a variable capacitor (controllable variable capacitance) and inductor (L shunt) in a series resonance configuration (see Figure 13B, See Col. 11, 35-67);
- a ferrite core transformer coupled to the resonantly tunable circuit (See Col. 11, lines 35-67).

Regarding Claim 2, Goodman discloses that the transformer inherently comprises a secondary winding and a primary winding since all transformers comprises at least two sides of windings in order to transform a voltage into another amount of

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voltage and the second winding inherently couples the transformer to the tunable circuit since the transformer itself couples to the tunable circuit (See Col. 11, lines 35-67).

Regarding Claim 12, in addition to the detail on the above rejection of claim 1, Goodman further discloses an RF power supply (See Figures 1, 2, 5), a coaxial cable connected to the RF power supply (Col. 7, line 50 to Col. 8, line 44), an RF antenna connected to an output of the matching network (See Figures 13A, B), a plasma ion generator having the RF antenna mounted therein for inductively generating a plasma (See Figures 6A, 6B, 7, 13A, 13B).

Regarding Claim 13, Goodman discloses that the transformer inherently comprises a secondary winding and a primary winding since all transformers comprises at least two sides of windings in order to transform a voltage into another amount of voltage and the second winding inherently couples the transformer to the tunable circuit since the transformer itself couples to the tunable circuit (See Col. 11, lines 35-67).

Allowable subject matter

Claims 3-11, 14-16, 17-24 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art neither discloses nor suggests the following limitations, in combination with the remaining elements as disclosed in the independent claims 3, 4, 5, 14, 15, 18, 21, 22:

- the transformer further comprises a core which is made of a plurality of ferrite cores such as required by claims 4, 5, 15, 21;

- the secondary winding of the transformer is a single turn winding and a primary winding of the transformer is a multi-turn winding, the secondary winding is coupled to the tunable circuit such as required by claims 3, 14;
- the transformer comprises a core made of 12 ferrite cores with a 1.25 inch OD and 0.75 inch ID, made of M-type ferrite such as required by claim 8;
- the plasma ion or electron generator is a multicusp plasma generator such as required by claim 18 and 22.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Wilson Lee", is written over a horizontal line.

Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office

9/5/06